DOCUMENT RESUME

ED 394 716 PS 024 171

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TITLE World Saver Center.
PUB DATE Apr 96
NOTE 28p.
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Art Activities; *Classroom Design; *Classroom Environment; Classroom Techniques; *Conservation (Environment); Cultural Activities; Cultural Awareness; Curriculum Design; Enrichment Activities; Handicrafts; Learning Activities; Learning Centers (Classroom); *Multicultural Education; Play; Recycling; Science Activities; Sciences; *Thematic Approach
IDENTIFIERS Multicultural Materials

ABSTRACT

Conservation is a concern for all cultures, and children are familiar with this concept because of recycling in their homes and home towns. The World Saver Center, an example of the thematic approach to learning, is designed to allow children to experiment with concepts of conservation in a familiar setting. The center, designed to resemble an early childhood classroom, is composed of five thematic areas: (1) art; (2) housekeeping; (3) blocks; (4) craft; and (5) garden (science). The World Saver Center focuses on conservation activities which can be done in a typical classroom, incorporating a multicultural theme into units. For each area, activity plans are given, including purpose, materials needed, teachers' involvement, and reflection statements. (BGC)

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ED 394 716

World Saver Center

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Introduction:

The topic of conservation was chosen for our early childhood classroom because conservation is a concern for all cultures. Most cultures are working to save on the limited resources which are available. Children have some understanding of this concept from recycling in their homes and home towns. The World Saver Center was designed to allow the children to experiment with these concepts in a familiar setting.

The World Saver Center, a separate classroom, was designed to resemble a typical early childhood classroom. The room is composed of five sections that are typical to most classrooms. These areas are art, housekeeping, blocks, craft and garden (science). We have chosen these centers so that others will be able to incorporate these activities into their classrooms. This room is designed so that three to five children with two adults can work cooperatively and comfortably. We also feel that when children work together for one half an hour, they will develop literacy skills. The children develop skills through interaction with the environment of the World Saver Center.

The children were introduced to the World Saver Center two at a time so that they could explore the areas freely. The concepts of conservation have also been slowly integrated into the other two classrooms. This was crucial so that the children can make the connection between the learning that occurs in the World Saver Center and other areas of the child's life. The World Saver Center focuses on the type of conservation which can be done in a typical classroom, but we also incorporated a multicultural theme into the units. We have discussed with the children and their families how they conserve in their own homes and homelands.

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Art

Idea (purpose)
The idea of this area is to allow the children to explore with various art media. Children will be using recycled materials to produce their art work. Children can create art which can be brought home, hung up in the room, or incorporated into other areas in the room.

Materials
--newspaper
--egg cartons
--Styrofoam peanuts
--strawberry baskets
--cotton
--film containers
--watered down glue
--crayons
--toilet paper tubes
--string/yarn
--bubble wrap
--recycled paper from old class murals
--streamers
--ice cream sticks
--plastic containers
--brushes
--any other recycled materials that you have available

How You visualize the child/children **PLAYING**
Children will explore with the materials to make art projects which they choose to create. Children can use the various materials to create art while in a relaxed atmosphere which encourages creativity and exploration.

Adult/Teacher's involvement in Children's **PLAY**
Adults will introduce the children to the various materials in the area. They will assist the children in the clean-up of the projects and the area. Adults will discuss the children's art with the child and discover what the child wishes to do with the final project.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Dramatic Play--Housekeeping

Idea (purpose)
The idea of this area is to allow children to explore how they can use the concept conservation at home, by incorporating conservation concepts into a kitchen area. when children play with items that can be used in their in their own house they will see how they can conserve at home. Children can develop concepts about how conservation fits into their everyday life.

Materials
-typical kitchen appliances
-generic food items
-condensed items
-shopping lists
-dish towels and sponges
-brooms, mop, etc...
-table and chairs
-high bulk / low cost foods (rice, pasta, etc...)
-bulk food items
-recycling bins
-cleaning supplies (empty containers)
-trash barrels
-washing machine with adapted dials-- that say small, medium and large loads and little, more, and most water

How You visualize the child/children **PLAYING**
Children will use area just as in any other kitchen area, interacting with the materials. Children will use the conservation materials in their play in the ways which they see these various materials used in their homes.

Adult/Teacher's involvement in Children's **PLAY**
Adults will monitor children's play watching for how they use the materials, especially the conservation materials. Adults will interact in play only when the interaction will not disturb the natural play of the children. The adult can introduce children to the inserted materials and show the child through play how the various materials are used.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+
Center: Housekeeping

Idea (purpose)
The way we can save water when we brush our teeth and how we can keep our teeth clean and healthy by discussing the proper way to brush your teeth and eating healthy snacks.

Materials
-any pictures of healthy and unhealthy teeth
-any pictures of healthy and unhealthy snacks
-any materials to demonstrate the proper way to brush your teeth such as
-toothbrushes
-toothpaste
-cups
-model teeth or pictures

How You visualize the child/children **PLAYING**
I visualize the children holding their toothbrushes and following adult's demonstration on how to brush their teeth. The children will use only one cup of water to clean their teeth instead of running the water. The children will identify what kinds of foods are healthy or unhealthy for their teeth.

Adult/Teacher's involvement in Children's **PLAY**
Adults will talk about the importance of saving water and the ways to save water, for example brushing their teeth with a cup of water not with the water running. The adult will demonstrate to the children how to brush their teeth properly in order to keep them clean and healthy. Adults will ask the children what they can eat to keep their teeth and body healthy.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2 1/2+
Center: Housekeeping

Idea (purpose)
The idea is to show children that you can rinse out and reuse certain materials instead of throwing them away.

Materials
-basin or small pool
-plastic cups, plates, utensils, and bags
-clear gentle detergent
-aluminum cans with their tops taped

How You visualize the child/children **PLAYING**
The children are to take various items and wash them in a basin or small pool. They should dry them and put them away.

Adult/Teacher's involvement in Children's **PLAY**
Explain to the children that this is a form of recycling. When you RINSE OUT and REUSE, you are saving the environment.
Modification: For toddlers, use a water table or basin placed **up** on a table and use less water.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Housekeeping

Idea (purpose)
The idea is to allow the children to practice sorting and classifying items into the appropriate bins. They will also learn that recycling is important for the Earth.

Materials
-recycling bins (plastic, paper, cans, cardboard)
-various items to be recycled
-homemade buttons reading "I am a successful recycler!" or "I successfully recycled!"

How You visualize the child/children **PLAYING**
The child will bring in recycling items and sort them into the appropriate bins. The children will then participate in emptying their bins into the truck.

Adult/Teacher's involvement in Children's **PLAY**
The adults will set up the bins. Then they will discuss what recycling is and why it is important. At the end of the unit have a recycling company bring their truck to the school and have the children empty their bins into the truck. Each child can then receive a button.
Modifications: In a small kitchen area, you could just put one bin and have the children use the bin in their dramatic play.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Blocks

Idea (purpose)
The idea of this area is to allow the children to explore the concepts of conservation through the insertion of materials into the blocks area. Children will create environments in which they can develop concepts such as animal protection and recycling in their community.

Materials

-blocks
-multicultural dolls (block people)
-recycling bins
-garbage truck
-sea animal
-forest animals
-doll house
-doll house furniture
-transportation vehicles
-recycling truck
-jungle animals
-kiddie pool

How You visualize the child/children **PLAYING**
Children will build with blocks making buildings. Children will incorporate vehicles and people into buildings. Children will use pool to play with sea animals. Children will use vehicles and bins with doll house to represent their homes and towns.

Adult/Teacher's involvement in Children's **PLAY**
Adults will observe the children in their interaction with the play center. Adults will play with the children and incorporate conservation concepts naturally into the play setting.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Craft

Idea (purpose)
The idea of this area is to allow the children to explore with various craft concepts. Children will be using recycled materials to make their craft activities. Children will be working on directed craft activities and some beginning word working. At this areas children will be working together to produce projects which will be displayed in the classroom and later can be brought home.

Materials
(these material will be distributed in conjunction with the specific craft activities that are being produced on the specific days)

--newspaper
--egg cartons
--Styrofoam peanuts
--strawberry baskets
--cotton
--film containers
--watered down glue
--crayons
--toilet paper tubes
--string/yarn
--bubble wrap
--recycled paper from old class murals
--streamers
--ice cream sticks
--plastic containers
--brushes
--any other recycled materials that you have available
-wood working materials (plastic tools used for children under 3 1/2)

How You visualize the child/children **PLAYING**
Children will work in conjunction with the teacher to produce directed craft activities. These activities have choice, but the general activity is directed. The children will work together and share the materials that are being used in the activity.

Adult/Teacher's involvement in Children's **PLAY**
Adults will introduce the children to the various materials in the area. They will assist the children when need in the production of their craft activity. They will assist the children in the clean-up of the projects and the area. Adults will discuss the children's craft projects with the child and discover what the child wishes to do with the final project. When woodworking is set up the adults will monitor the children on a one-to-one basis to ensure safety. During wood working there need to be less children due to the need for more supervision.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Craft

Idea (purpose)
In this activity, the children get the opportunity to be creative by themselves, and make their own toys. This helps not only to develop fine motor skills, but also enhances children's imagination. Best of all, children learn that items can be used over instead of throwing them away. Children will see that one can make something meaningful out of old items. Children, therefore, they will learn to value things more, since every object or material will have multiple purposes.

Materials
-paper (of any recycled variety)
-crayons
-scissors
-paint

How You visualize the child/children **PLAYING**
Children can cut the paper into the size of the plane or boat they want to make. Then with the guidance of the teacher, they can fold the paper by themselves to form the shape of the above mentioned toys. They can also paint or color the boat or airplanes. They can imagine names and create symbols for their own vehicle. They can take their boats to the classroom's water table or any vessel full of water. There they can pretend to go fishing or be a sailor. Children can use their airplanes at the sand table or in the blocks area. Children can pretend to be pilots or landing crews.

Adult/Teacher's involvement in Children's **PLAY**
Adults will have to guide the children in making the toys. It is under adult direction that the children can fold the paper approximately to make the shape of the boat or the airplane. After the toys are made, the teacher can help to initiate the children's imagination. She can also help the child learn about the function and use of the vehicles.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Craft

Idea (purpose)
The idea is that the children realize that even things that they have always thought of as garbage (i.e.: old newspapers) can be used and reused in a productive way. Continuously seeing supplies being used as "popularly" used art materials will enable the children to see first hand and realize how materials can be recycled.

Materials
-large sheets of newspapers
-variety of different color paints
-paint brushes
-art easels or a large flat surface

How You visualize the child/children **PLAYING**
I can visualize the children enjoying themselves immensely as they are given the freedom to paint as they will on these old newspaper surfaces. Along with the original black and white background prints, paint on the newspaper should enable the children to see a mixture of colors and prints. They'll probably love their "own work of art!"

Adult/Teacher's involvement in Children's **PLAY**
Along with the praise that the painting will be due, the teacher's constant emphasis on how "great" the artwork is should naturally embed in the children a love for this type of project. Constant reminders and encouragement should result with the children looking forward to the idea of these types of artwork. Thus, children will eventually look forward to doing these resource efficient / saving projects.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Craft

Idea (purpose)
The idea is that children will realize how many different things there are that need to be, and can be recycled. With the usage of the combination of different recyclable odds and ends the children should create and see for themselves how things that would otherwise have been thrown away can be used to make a wonderful project (i.e.: pinata).

Materials
-balloons
-old newspapers
-flour
-water
-markers
-crayons
-recycled decorative materials for the children to decorate their "paper mache" pinatas.

How You visualize the child/children **PLAYING**
I can visualize the children at first being in wonder as they place the wet newspaper strips on the balloon. However when it dries and the children start to decorate the "figure" the children should have the time of their lives. It may get a little messy, but with proper supervision and assistance the project should not pose as such a problem.

Adult/Teacher's involvement in Children's **PLAY**
It would be helpful for the adults to explain to the children what a pinata is and to show them examples of it. Along with explaining how this is part of another culture this project would serve as both a recycling and a multicultural project. Because this is a very tactile project discussions can also be conducted on the different feel that the recycled materials have when wet, dry, etc.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+
Center: Craft

Idea (purpose)
The idea of this activity is for the children to learn how to recycle a milk carton. Children will discover ways to use empty milk cartons, for example as a cookie jar, blocks or an organizer.

Materials

-empty milk cartons (juice)
-construction paper (or any other paper)
-crayons
-markers
-scissors
-glue
-paints
-tape

How You visualize the child/children **PLAYING**
The children will decorate the cartons by pasting the papers, drawing and making their favorite animals, or coloring with markers, paints, or crayons. The children will create their own cookie jars (or organizers) to use in their homes and their play. They will learn how to make their own toys (blocks)

Adult/Teacher's involvement in Children's **PLAY**
Adults can help the children to decide what they are going to make. Adult should let the children decorate cartons by themselves without any interruptions or help. Adults can ask the children what else they can do with empty milk cartons and could have follow-up activities based on these ideas.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+
Center: Craft

Idea (purpose)
The ideas is to show how people used to make paper in the past and how we can make our own from recycled papers by using recyclable paper products.

Materials
-window screen-like material
-plastic dishpan
-large spoon
-old towels
-masking tape or straw
-wax paper
-scissors
-water
-old papers (brown bags, newspapers, paper towels, tissue paper, etc...)

How You visualize the child/children **PLAYING**
I visualize the children having fun with tearing and cutting old papers with scissors to soak in the water. the children will mix and stir paper pieces and water until they are will blended. They will put the well blended paper-water mixture onto the prepared screen to make the recycled papers and will watch how the drying process is done. They will learn how to work together cooperatively.

Adult/Teacher's involvement in Children's **PLAY**
The adults will guide the children in a step-by-step procedure with safety precautions. Adults can talk about the finished product and how the children can use the recycled papers for other activities. Adults can talk about where the paper came from (what the paper is made out of). Adults should ask the children open-ended questions. This activity can be used as a science activity (mixing paper and water and the process of the mixture drying).

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 4+
Center: Craft

Idea (purpose)
To talk with the children about the ways to generate electricity in the U.S. and other countries, for example water dam, wind, etc... This is an art activity to make a pinwheel or weather vane.

Materials
-any size magazine pages in a square shape
-different color paper
-wood sticks or foam blocks
-pictures of dams and other ways of generating energy
-thumb tacks or pins
-scissors

How You visualize the child/children **PLAYING**
The children will cut the paper by cutting from corners to the middle without cutting all the way to the center. They can decorate as they wish with different colors of paper. As they finish their pinwheels, they can try to blow and make pinwheels turn.

Adult/Teacher's involvement in Children's **PLAY**
Adults should supervise for safety precautions. Adults should explain how electricity is generated in many different ways by water and wind. Adults should let the children explore and make their own pinwheels. Adults can use this activity as a science activity by talking about the different colors and how the pinwheel turns.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Craft and Garden

Idea (purpose)
The idea of this activity is to allow the children to create a visual representation of the layers of the Earth. The children will be exploring with various art material to design strips to represent the layers of the Earth. When the activity is complete it will be hung in the gardening center as a mural of the layers of the Earth.

Materials
-paper cut into strips one for each layer of the Earth--rocks, dirt, soil, grass, sky
--we made 2 of each layer except sky which we made 4 strips we choose these numbers to fit into the area we have chosen to hang the mural

-crayons
-dried coffee grounds
-glue
-yarn
-cotton
-brushes

How You visualize the child/children **PLAYING**
Children will create the layers of the Earth with the various material that are set out to create the layer that is being worked on that day. Children will color, glue, and make decisions how they will represent the layers of the Earth.

Adult/Teacher's involvement in Children's **PLAY**
Adults will point out to the children what they are working on and discuss the layer that is being created on that day. Adults will provide extra materials if the children request materials to add to the mural. Adults will hang the layers as they are completed.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Garden

Idea (purpose)
The idea of this area is to allow the children to explore with various gardening concepts. Children will be caring for plants and discovering how plants grow. Children will be discussing how the growing of plants, trees and vegetables helps the environment. Children will be learning about the importance of trees and how they can assist in the growing of trees and other plants. Children will be receiving their own trees to grow and this will be one of the main features of this area.

Materials
-plants
-fruits/ vegetables
-soil
-magnifying glasses
-watering cans
-seeds
-kiddie pool

How You visualize the child/children **PLAYING**
Children will take care of their trees and other plants in the room. Children will explore concepts in gardening and taking care of trees and plants. Children will discuss the importance of taking care of plants and trees. Children will work together to care for and plant classroom plants and trees.

Adult/Teacher's involvement in Children's **PLAY**
Adults will introduce the children to the various materials in the area. They will assist the children in the care of their plants. Adults will discuss the importance of trees and plants. They will assist the children in the understanding of how the children are caring for their environment through gardening and planting trees. They will assist the children in the clean-up of the activities and the area.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+ (adaptations for 2+)
Center: Garden with kiddie pool (adapt with water buckets on a table for younger children)

Idea (purpose)
In support of the "world saver" theme the idea is that the children realize that already used materials that would otherwise be thrown away can be reused to make beautiful and practical art works. They should learn the concept of cleaning and saving.

Material's
-old plastic bottles
-glitter
-name labels
-water
-LIDS for plastic bottles

How You visualize the child/children **PLAYING**
I can visualize the children having the time of their life playing with the water as they rinse and clean out the old bottles. Then as they refill the bottles with water and glitter the children should be happy to have made themselves a toy that serves as a reminder of that "they did" as well as serve as a souvenir for them to take home to play with.

Adult/Teacher's involvement in Children's **PLAY**
The adult's involvement should consist of the step-by-step explanation of the process, of how to make this "sparkling" decoration, and of how the bottle was almost thrown away, but was reused instead. This too, is an example with hands-on experience that will show the children what it is to recycle and how to do it in a creative manner.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+ (adaptations for 2+)
Center: Garden

Idea (purpose)
The idea is to show the children that fruits and vegetables produce their own seeds inside of them. The children will also observe the many different sizes, shapes, and colors of seeds.

Materials
-plastic bags that seal -egg cartons
-several pieces of fruit and vegetable cut in half (apples, orange, pea pods, tomatoes, pepper, peach, corn on the cob, etc.)

How You visualize the child/children **PLAYING**
The children can observe different kinds of seeds and where they come from. They may touch and manipulate the seeds and halves of fruits / vegetables.

Adult/Teacher's involvement in Children's **PLAY**
The adults should set up the activities:
-have the fruit and vegetables cut in half and wrapped in a sealed plastic bag.
-the bags should be labeled
-have some of their seeds placed in a labeled egg carton
Since the pea is also a seed, the pea pod with some peas in it will be in the labeled sealed bag, while just some peas will be placed in the egg carton. Corn on the cob follows the same concept, with the actual corn kernel being the seed. The other half of the fruits can be used to make fruit salad for the day's snack.
Teachers can ask these or similar questions while the children are observing to facilitate learning:
-Where do seeds come from?
-How many seeds does it take to grow one plant?
-Are the seeds different shapes? How many do you see?
-Are the seeds different colors? How many do you see?
-Are the seeds different sizes? How many do you see?
-Where are the pea's and corn's seeds?
Modification: Place the seeds in plastic bags for the toddlers instead of the egg carton.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Garden

Idea (purpose)
The idea is to show the children what is inside the seed.

Materials
-soaked lima or pinto beans
-magnifying glasses
-plastic wrap
-plates

How You visualize the child/children **PLAYING**
The children observe the bean seed with a magnifying glass and ask questions.

Adult/Teacher's involvement in Children's **PLAY**
The teacher should prepare the activity:
-in advance soak the beans overnight
-on the first plate, have a whole bean
-on the second plate, have a whole bean with the seed coat next to it. To remove the coat off, gently rub the seed between you thumb and finger.
-on the third plate split the bean into two sections, so that the children can see the plant baby inside the seed.

embryo- baby plant (you can see the root and the leaves)
hilum- where the seed was attached to the stem of the plant
cotyledon- food for the baby plant

While the children are observing, these questions and statements may be said to facilitate learning:
-What is the coating for? (It is like the skin, it protects the seed)
-Do you see the baby plant?
-What do you think the baby plant eats

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2 1/2+
Center: Garden

Idea (purpose)
The idea is to let the children see what it takes to make the "baby plant" come out of the seed (germinate).

Materials
-lima beans
-twist ties
-plastic bags
-spray bottle with water
-paper towels

How You visualize the child/children **PLAYING**
The children do the activity:
1. Take a paper towel
2. Place two beans on the paper towel
3. Roll each sheet with the seeds inside to make a roll or tube
4. Thoroughly moisten the roll or tube with the spray bottle
5. Place in a plastic bag and close the bag with a twist tie
6. Place the bag in a warm, dark place
7. When the seeds have germinated (2 or 3 days), open their roll and examine their seeds. They may touch and manipulate the seeds.

Adult/Teacher's involvement in Children's **PLAY**
The adults needs to prepare all of the materials and help the children do the activity. After the seeds germinate, the adults may ask the following question:
-What did we do to make the seeds grow (plant "babies" come out)?
(watered them and placed them in a warm, dark environment)

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Garden

Idea (purpose)
This activity is an easy activity to be developed by the children. Through this activity it will be possible to follow the whole process of planting a seed and each stage of growth. Through this activity each child will have an active contribution to the environment because though their experiment, they will be nurturing a plant until it grows.

Since young children need concrete experiences to construct their concepts, this activity will show that a tree is not always big, but that one day it had to have been planted as a seed. Children can begin to understand that when a seed grows it will become a tree. Children will see the beginning stages of seed to seed reproduction.

Materials
-plastic cups
-beans (kidney, black beans, etc...)
-cotton balls
-water

How You visualize the child/children **PLAYING**
Each child will plant his/her own bean. They will have to put on the bottom of the cup a cotton ball which is spread out to cover the bottom of the cup. On top of that they will place one or two beans and then water until the cotton is wet. They will follow each step of its growth and be attentive towards the plants needs such as water, light, and extra cotton.

Adult/Teacher's involvement in Children's **PLAY**
The adult will be working together with the children pointing out changes in the plant and showing how it develops. The adult will also emphasize that this is a small part of our environment and as all of our world we need to take care of the plant.

The teacher can show that taking care of the environment involves not only big things, such as endangered animals and rain forests, but also the small things we can do by ourselves.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 3+ (modification 2+)
Center: Garden

Idea (purpose)
The idea is to show children how water can be cleaned through the filtration system.

Materials
-jar or plastic container
-small pebbles
-fine sand
-plastic funnel
-gravel

How You visualize the child/children **PLAYING**
The children will each take turns pouring muddy water through the funnel while discussing why the water runs clear.

Adult/Teacher's involvement in Children's **PLAY**
The adult should set up the activity:
1. Place the funnel into the jar
2. Add a layer of small pebbles
3. Add a layer of gravel
4. Add a layer of fine sand
5. Pour clear water through to settle the layers

The adult can facilitate learning by discussing that dirty water can be cleaned many different ways. One is filtration.
Modification: Instead of a funnel filled with pebbles, sand, and gravel, you can place a funnel into an inexpensive water filter that you can find at the hardware store. Another way of doing filtration is to use a paper coffee filter and the part that the filter fits into on an automatic drip coffee maker.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2 1/2+
Center: Garden

Idea (purpose)
The idea is for the children to find out what is in soil and what it feels like.

Materials
-soil
-containers or plastic baby pool
-digging tools

How You visualize the child/children **PLAYING**
The children should observe and manipulate the dirt. They may use their hands or digging tools. They should be allowed to bring materials from other areas to use in their soil.

Adult/Teacher's involvement in Children's **PLAY**
The adult needs to place the dirt into a container or baby pool. The digging tools should be placed within reach of those playing in with the soil. The adult may ask questions such as:
-What does the soil feel like?
-What does the soil smell like?
-What do you see in the soil?
Modification: If the weather permits, the children should be allowed to go outside and dig their own soil.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Garden

Idea (purpose)
The idea is to show the children that worms are our friends and that they produce a natural way to help plants grow.

Materials
-composting worms (red hybrids or red wigglers)
-worm box (wooden box or a plastic container with cover)
-organic bedding material (shredded leaves, newspaper, cardboard, or peat moss)
-few handfuls of garden soil (microbial decomposters)
-kitchen scraps (blended or chopped scraps (minus the liquid, breaks down faster)
-Resource book = *Environmentally Friendly Gardening: Easy Composting*
by: Ortho Books (1992) California: Monstanto Co. pp.. 57-59.

How You visualize the child/children **PLAYING**
The children should add the kitchen scraps to the worm box. They should maintain the box by adding new bedding material and removing the worm castings (fertilized soil) when needed. The children should be allowed to touch and play with the worms. (Toddlers need to be well supervised)

Adult/Teacher's involvement in Children's **PLAY**
The adult must set up the box and help maintain it. Refer to resource book.
Worms: The amount of worms needed depends on how much waste is to be composted. Two pounds or worms (1000= 1 lb...) for every pound of waste is a standard ratio. For example, about 1/2 lb. of kitchen waste daily, should equal 1 lb... of worms. Composting worms need to be kept in a warm (55-77 degrees Fahrenheit), moist environment. To have the proper moisture level (75%), weigh the bedding material and then multiply that weight by three. That weight is how much water you need to add to the bedding material, (1 pint = 1 pound) for example if you have one pound of bedding material, you would need to add 3 lb. of water to it. Most composting worms have to be mail ordered and can be found in seed and gardening catalogs. **Remember**, composting worms will not survive outdoors year round.
Box: The box should be wooden or plastic and have a cover to go with it. A sheet of black plastic could be used as a cover. This is to keep moisture in and light out. The size of the box depends on how much waste you have. You need one square foot of surface area for each pound of waste per week. For example, one pound of waste requires one square foot of space. The box should therefore be, 1 x 1 foot. The box should be at least 8- 12 inches deep to avoid compaction.
Waste: The worms can digest most organic kitchen waste. The best kind of waste is peels and pieces from fruits and vegetables. Meat can be composted, but there is

more of a chance that it will produce an odor or attract insects. The waste should be broken into smaller pieces or blended in a blender before adding to the worms box. It is easier for the worms to digest. When blending, drain the liquid off before adding to the box.

Bedding Material: Worms need an organic bedding material. This allows air to get into the soil for the worms. Organic bedding material consists of things such as shredded leaves, newspaper, cardboard, or peat moss. To produce this material, take items that you have and mix together. You must add a few handfuls of garden soil to this mixture to provide microbial decomposters in the box. This aids the worms in the decomposition of the waste. This bedding material will decompose, therefore, you must add new bedding material when necessary.

To set up the box:

1. Calculate the right box size for your needs
2. Calculate the right amount of worms
3. Mix enough organic material to fill the box, leaving about 1- 2 inches at the top for additional waste.
4. Weigh that material and calculate the liquid needed to maintain proper moisture.
5. Mix organic material and liquid in the box.
6. Add the worms
7. Begin adding kitchen waste. Whenever you add waste, you must cover it with bedding material.
8. Place a cover on the box to keep in moisture and keep out the light.
9. To maintain the box, check daily to make sure there is enough bedding material, moisture and waste. If not, add each respectfully.
10. Remove worm castings and place around your plants. Always replace compost with new bedding material. A simple way to remove compost and not worms is to expose the box to light. The worms will move to the center of the box and leave compost along the edges.

A properly maintained worm box should not attract pests or have an odor. If it does, check the steps to make sure that everything is correct.

Reflection--How the children adapted the idea

ECRC Activity Plan
World Saver Center

Theme: Conservation
Appropriate Age: 2+
Center: Garden

Idea (purpose)
The children will understand the responsibility of taking care of a tree. The children will also learn that trees and plants are important in keeping our environment healthy.

Materials
-watering cans -digging and gardening tools
-evergreen trees (or any tree more sturdier than a maple, etc.)

How You visualize the child/children **PLAYING**
The children will take care of their own tree by watering it and by placing it in the sun. They will be able to take their trees home with them at the end of the unit. The children will also learn about planting trees when they plant some of the trees outside.

Adult/Teacher's involvement in Children's **PLAY**
The adult should order enough evergreen trees so that each child will receive one and there are some left over for planting outside in the spring. The adult should discuss with the children the importance of water and sunlight to plants and trees. In the spring, the teacher will help the children plant the extra trees outside. Trees may be ordered from a nursery or through a tree catalog.

Reflection--How the children adapted the idea